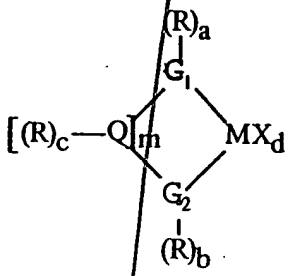
Please add the following new claims.

--56. A catalyst for polymerization of alpha-olefins, wherein the catalyst comprises a cocatalyst and a catalyst component, wherein the catalyst component comprises a metallocene complex and a support, wherein the metallocene complex is supported on the support, wherein the metallocene complex is defined by formula I or II:

$$(G(R)_a)_xMX_y \qquad I$$



II

wherein:

R groups are equal to or different from each other; R is hydrogen or a radical containing from 1 to 20 carbon atoms; R optionally contains a heteroatom selected from the group consisting of elements from groups 14 through 16 of the periodic table of the elements and boron; at least one R group contains an $OSiR''_3$ group, wherein R'' is selected from the group consisting of: linear C_1-C_{20} alkyl, branched C_1-C_{20} alkyl, linear C_3-C_{20} cycloalkyl, branched C_3-C_{20} cycloalkyl, linear C_6-C_{20} aryl, branched C_6-C_{20} aryl, linear C_7-C_{20} alkenyl, branched C_7-C_{20} alkenyl, linear C_7-C_{20} arylalkyl, branched C_7-C_{20} arylalkyl, linear C_7-C_{20} arylalkenyl,

branched C_7-C_{20} arylalkenyl, linear C_7-C_{20} alkylaryl, and branched C_7-C_{20} alkylaryl;

Q is selected from the group consisting of: boron and elements from groups 14 and 16 of the periodic table; when **m** > 1, Q groups are equal to or different from each other; free valences of every Q are filled with the R group or groups according to a value of **c**; two R groups optionally are bonded to form a ring having from 5 to 8 atoms; **m** ranges from 1 to 4;

G groups are equal to or different from each other; G is a cyclic organic group bonded to M through a π bond, G contains a cyclopentadienyl ring that optionally is fused with one or more other rings, or G is an atom selected from the group consisting of elements from groups 15 and 16 of the periodic table;

G_1 and G_2 are equal to or different from each other; G_1 and G_2 have the same meaning as G;

M is a metal selected from the group consisting of: elements from groups 3, 4, and 10 of the periodic table, lanthanides, and actinides;

X groups are equal to or different from each other; X is selected from the group consisting of: halogen, hydrogen, OR"', $N(R"')_2$, C_1-C_{20} alkyl, and C_6-C_{20} aryl; wherein R"' is selected from the group consisting of: linear C_1-C_{20} alkyl, branched C_1-C_{20} alkyl, linear C_3-C_{20} cycloalkyl, branched C_3-C_{20} cycloalkyl, linear C_6-C_{20} aryl, branched C_6-C_{20} aryl, linear C_7-C_{20} alkenyl, branched C_7-C_{20} alkenyl, linear C_7-C_{20} arylalkyl, branched C_7-C_{20} arylalkyl, linear C_7-C_{20} arylalkenyl, branched C_7-C_{20} arylalkenyl, linear C_7-C_{20} alkylaryl, and branched C_7-C_{20} alkylaryl;

x is 1 or 2, **y** is 2 or 3 in such a way that **x** + **y** = 4;
d is an integer ranging from 0 to 2; and **a**, **b** and **c** are integers from 0 to 10 in such a way that **a** + **b** + **c** $\geq$ 1;
wherein the metallocene complex is supported on the support by means of a bond resulting from a reaction of the $OSiR"_3$ group of

the metallocene complex with a reactive group on a surface of the support; and
wherein the $OSiR"_3$ group is not directly bonded to Q when Q is Si.

57. A catalyst as claimed in Claim 56 wherein in formula I or II R is selected from the group consisting of: hydrogen, SiR'_3, linear C_1-C_{20} alkyl, branched C_1-C_{20} alkyl, linear C_3-C_{20} cycloalkyl, branched C_3-C_{20} cycloalkyl, linear C_6-C_{20} aryl, branched C_6-C_{20} aryl, linear C_7-C_{20} alkenyl, branched C_7-C_{20} alkenyl, linear C_7-C_{20} arylalkyl, branched C_7-C_{20} arylalkyl, linear C_7-C_{20} arylalkenyl, branched C_7-C_{20} arylalkenyl, linear C_7-C_{20} alkylaryl, and branched C_7-C_{20} alkylaryl; and optionally each R group contains a heteroatom selected from the group consisting of: elements of groups 14 through 16 of the periodic table of the elements and boron.

58. A catalyst as claimed in Claim 56 wherein in formula I or II M is selected from the group consisting of: Ti, Zr, and Hf.

59. A catalyst as claimed in Claim 56 wherein in formula I or II the R group containing the group OSiR" is selected from the group consisting of: $-CH_2-CH_2-OSiMe_3$, $-CH_2-CH_2-CH_2-OSiMe_3$, $-CH_2-O-CH_2-OSiMe_3$, $-O-CH_2-CH_2-OSiMe_3$, and $-SiMe_2-CH_2-CH_2-OSiMe_3$.

60. A catalyst as claimed in Claim 56 wherein in formula I G is cyclopentadienyl or indenyl; M is zirconium; **x** is 2; **y** is 2; R is C_1-C_4 alkyl, wherein at least one hydrogen of one R is substituted with $OSiR"_3$ wherein R" is selected from the group consisting of: Me, Et, and Pr.

61. A catalyst as claimed in Claim 57 wherein in formula II M is

zirconium; G_1 and G_2 are cyclopentadienyl or indenyl; R is hydrogen, a C_1-C_4 alkyl wherein at least one hydrogen of one R is substituted with $OSiR''_3$ or a SiR'_2-$OSiR''_3$ group, wherein R" is selected from the group consisting of: methyl, ethyl, propyl; $[(R)_cQ]_m$ is H_2C-CH_2, CRH-CH_2, RHC-SiR'_2, R_2C-SiR'_2, and SiRR'.

62. A catalyst as claimed in Claim 57 wherein in formula II M is titanium; G_2 is an oxygen or a nitrogen atom; G_1 is a cyclopentadienyl, indenyl or fluorenyl ring; $[(R)_cQ]_m$ is H_2C-CH_2, CRH-CH_2, RHC-SiR'_2, R_2C-SiR'_2, or SiRR'.

63. A catalyst as claimed in Claim 56 wherein the support comprises an inorganic solid selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

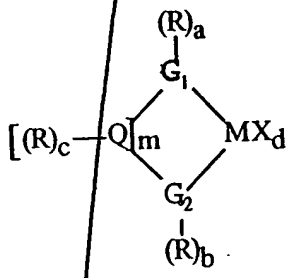
64. A catalyst as claimed in Claim 56 wherein the cocatalyst is selected from the group consisting of: an alkylaluminoxane, boron compounds, and mixtures thereof.

65. A process for preparing a catalyst as claimed in Claim 56, wherein the catalyst comprises a cocatalyst and a catalyst component, wherein the catalyst component comprises a metallocene complex and a support, wherein the metallocene complex is supported on the support, wherein the process comprises the following steps:

(a) impregnation, under anhydrous conditions and an inert atmosphere at a temperature between -20°C and 90°C, of a solution comprising at least one metallocene complex

on the support, wherein the metallocene complex is defined by formula I or II

$$(G(R)_a)_xMX_y \qquad \text{I}$$



II

wherein:

R groups are equal to or different from each other; R is hydrogen or a radical containing from 1 to 20 carbon atoms; R optionally contains a heteroatom selected from the group consisting of elements from groups 14 through 16 of the periodic table of the elements and boron; at least one R group contains an $OSiR''_3$ group, wherein R" is selected from the group consisting of: linear C_1-C_{20} alkyl, branched C_1-C_{20} alkyl, linear C_3-C_{20} cycloalkyl, branched C_3-C_{20} cycloalkyl, linear C_6-C_{20} aryl, branched C_6-C_{20} aryl, linear C_7-C_{20} alkenyl, branched C_7-C_{20} alkenyl, linear C_7-C_{20} arylalkyl, branched C_7-C_{20} arylalkyl, linear C_7-C_{20} arylalkenyl, branched C_7-C_{20} arylalkenyl, linear C_7-C_{20} alkylaryl, and branched C_7-C_{20} alkylaryl;

Q is selected from the group consisting of: boron and elements from groups 14 and 16 of the periodic table; when **m** > 1,

Q groups are equal to or different from each other; free valences of every Q are filled with the R group or groups according to a value of **c**; two R groups optionally are bonded to form a ring having from 5 to 8 atoms; **m** ranges from 1 to 4;

G groups are equal to or different from each other; G is a cyclic organic group bonded to M through a π bond, G contains a cyclopentadienyl ring that optionally is fused with one or more other rings, or G is an atom selected from the group consisting of elements from groups 15 and 16 of the periodic table;

G_1 and G_2 are equal to or different from each other; G_1 and G_2 have the same meaning as G;

M is a metal selected from the group consisting of: elements from groups 3, 4, and 10 of the periodic table, lanthanides, and actinides;

X groups are equal to or different from each other; X is selected from the group consisting of: halogen, hydrogen, OR"', $N(R"')_2$, C_1-C_{20} alkyl, and C_6-C_{20} aryl; wherein R"' is selected from the group consisting of: linear C_1-C_{20} alkyl, branched C_1-C_{20} alkyl, linear C_3-C_{20} cycloalkyl, branched C_3-C_{20} cycloalkyl, linear C_6-C_{20} aryl, branched C_6-C_{20} aryl, linear C_7-C_{20} alkenyl, branched C_7-C_{20} alkenyl, linear C_7-C_{20} arylalkyl, branched C_7-C_{20} arylalkyl, linear C_7-C_{20} arylalkenyl, branched C_7-C_{20} arylalkenyl, linear C_7-C_{20} alkylaryl, and branched C_7-C_{20} alkylaryl;

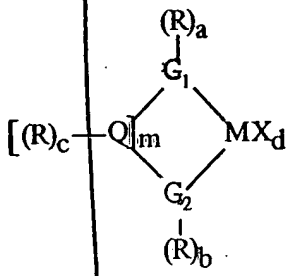
x is 1 or 2, **y** is 2 or 3 in such a way that **x** + **y** = 4;
d is an integer ranging from 0 to 2; and **a**, **b** and **c** are integers from 0 to 10 in such a way that **a** + **b** + **c** $\geq$ 1;
wherein the $OSiR"_3$ group of the metallocene complex reacts with a reactive group of the support to bond the metallocene complex to the support, thereby forming a resulting solid comprising the metallocene complex supported on the support;
wherein the $OSiR"_3$ group is not directly bonded to Q when Q is Si; and

(b) filtration and washing the resulting solid from step (a) with a solvent comprising an aliphatic hydrocarbon or an aromatic hydrocarbon.

66. A process for preparing a catalyst as claimed in Claim 56, wherein the catalyst comprises a cocatalyst and a catalyst component, wherein the catalyst component comprises a metallocene complex and a support, wherein the metallocene complex is supported on the support, wherein the process comprises the following steps:

(a) depositing at least one metallocene complex on the support by using a solution comprising a solvent and the metallocene complex to heterogenize, wherein the metallocene complex is defined by formula I or II:

$$(G(R)_a)_xMX_y \qquad I$$



II

wherein:

R groups are equal to or different from each other; R is hydrogen or a radical containing from 1 to 20 carbon atoms; R optionally contains a heteroatom selected from the group consisting of elements from groups 14 through 16 of the periodic table of the elements and boron; at least one R group contains an $OSiR''_3$ group, wherein R" is selected from the group consisting of: linear C_1-C_{20} alkyl, branched C_1-C_{20} alkyl, linear C_3-C_{20} cycloalkyl, branched C_3-C_{20} cycloalkyl, linear C_6-C_{20} aryl, branched C_6-C_{20} aryl, linear C_7-C_{20} alkenyl, branched C_7-C_{20} alkenyl, linear C_7-C_{20} arylalkyl, branched C_7-C_{20} arylalkyl, linear C_7-C_{20} arylalkenyl, branched C_7-C_{20} arylalkenyl, linear C_7-C_{20} alkylaryl, and branched C_7-C_{20} alkylaryl;

Q is selected from the group consisting of: boron and elements from groups 14 and 16 of the periodic table; when **m** > 1, Q groups are equal to or different from each other; free valences of every Q are filled with the R group or groups according to a value of **c**; two R groups optionally are bonded to form a ring having from 5 to 8 atoms; **m** ranges from 1 to 4;

G groups are equal to or different from each other; G is a cyclic organic group bonded to M through a π bond, G contains a cyclopentadienyl ring that optionally is fused with one or more other rings, or G is an atom selected from the group consisting of elements from groups 15 and 16 of the periodic table;

G_1 and G_2 are equal to or different from each other; G_1 and G_2 have the same meaning as G;

M is a metal selected from the group consisting of: elements from groups 3, 4, and 10 of the periodic table, lanthanides, and actinides;

X groups are equal to or different from each other; X is selected from the group consisting of: halogen, hydrogen, OR"',

$N(R'')_2$, C_1-C_{20} alkyl, and C_6-C_{20} aryl; wherein R"' is selected from the group consisting of: linear C_1-C_{20} alkyl, branched C_1-C_{20} alkyl, linear C_3-C_{20} cycloalkyl, branched C_3-C_{20} cycloalkyl, linear C_6-C_{20} aryl, branched C_6-C_{20} aryl, linear C_7-C_{20} alkenyl, branched C_7-C_{20} alkenyl, linear C_7-C_{20} arylalkyl, branched C_7-C_{20} arylalkyl, linear C_7-C_{20} arylalkenyl, branched C_7-C_{20} arylalkenyl, linear C_7-C_{20} alkylaryl, and branched C_7-C_{20} alkylaryl;

x is 1 or 2, **y** is 2 or 3 in such a way that **x** + **y** = 4;

d is an integer ranging from 0 to 2; and **a**, **b** and **c** are integers from 0 to 10 in such a way that **a** + **b** + **c** ≥ 1;

wherein the $OSiR''_3$ group of the metallocene complex reacts with a reactive group of the support to bond the metallocene complex to the support, thereby forming a resulting solid comprising the metallocene complex supported on the support;

(b) eliminating the solvent; and

(c) bringing the resulting solid to a temperature between 25 and 150°C.

67. A process as claimed in Claim 65, wherein before step (a) the metallocene complex is mixed with a cocatalyst.

68. A process as claimed in Claim 66, wherein before step (a) the metallocene complex is mixed with a cocatalyst.

69. A catalyst according to Claim 57, wherein in formula I or II M is selected from the group consisting of: Ti, Zr, and Hf.

70. A catalyst according to Claim 58, wherein in formula I or II M is selected from the group consisting of: Ti, Zr, and Hf.

71. A catalyst according to Claim 57, wherein the support comprises an inorganic solid selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

72. A catalyst according to Claim 59, wherein the support comprises an inorganic solid selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

73. A catalyst according to Claim 60, wherein the support comprises an inorganic solid selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

74. A catalyst according to Claim 61, wherein the support comprises an inorganic solid selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

75. A process as claimed in Claim 65 wherein in formula I or II R is selected from the group consisting of: hydrogen, SiR'_3, linear C_1-C_{20} alkyl, branched C_1-C_{20} alkyl, linear C_3-C_{20} cycloalkyl, branched C_3-C_{20} cycloalkyl, linear C_6-C_{20} aryl, branched C_6-C_{20} aryl, linear C_7-C_{20} alkenyl, branched C_7-C_{20} alkenyl, linear C_7-C_{20} arylalkyl, branched C_7-C_{20} arylalkyl, linear C_7-C_{20} arylalkenyl, branched C_7-C_{20} arylalkenyl, linear C_7-C_{20} alkylaryl, and branched C_7-C_{20} alkylaryl; and optionally each R group contains a heteroatom selected from the group consisting of: elements of groups 14 through 16 of the periodic table of the elements and boron.

76. A process according to Claim 65 wherein in formula I or II M is selected from the group consisting of: Ti, Zr, and Hf.

77. A process according to Claim 65 wherein in formula I or II the R group containing the group OSiR″ is selected from the group consisting of: $-CH_2-CH_2-OSiMe_3$, $-CH_2-CH_2-CH_2-OSiMe_3$, $-CH_2-O-CH_2-OSiMe_3$, $-O-CH_2-CH_2-OSiMe_3$, and $-SiMe_2-CH_2-CH_2-OSiMe_3$.

78. A process according to Claim 65 wherein in formula I G is cyclopentadienyl or indenyl; M is zirconium; **x** is 2; **y** is 2; R is C_1-C_4 alkyl, wherein at least one hydrogen of one R is substituted with $OSiR''_3$ wherein R″ is selected from the group consisting of: Me, Et, and Pr.

79. A process according to Claim 75 wherein in formula II M is zirconium; G_1 and G_2 are cyclopentadienyl or indenyl; R is hydrogen, a C_1-C_4 alkyl wherein at least one hydrogen of one R is substituted with $OSiR''_3$ or a $SiR'_2-OSiR''_3$ group, wherein R″ is selected from the group consisting of: methyl, ethyl, propyl; $[(R)_cQ]_m$ is H_2C-CH_2, $CRH-CH_2$, $RHC-SiR'_2$, $R_2C-SiR'_2$, and SiRR′.

80. A process according to Claim 65 wherein in formula II M is titanium; G_2 is an oxygen or a nitrogen atom; G_1 is a cyclopentadienyl, indenyl or fluorenyl ring; $[(R)_cQ]_m$ is H_2C-CH_2, $CRH-CH_2$, $RHC-SiR'_2$, $R_2C-SiR'_2$, or SiRR′.

81. A process according to Claim 67 wherein the cocatalyst is selected from the group consisting of: an alkylaluminoxane, boron compounds, and mixtures thereof.

82. A process according to Claim 65, wherein the support

comprises an inorganic solid selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

83. A process according to Claim 75, wherein the support comprises an inorganic solid selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

84. A process as claimed in Claim 66 wherein in formula I or II R is selected from the group consisting of: hydrogen, SiR'_3, linear C_1-C_{20} alkyl, branched C_1-C_{20} alkyl, linear C_3-C_{20} cycloalkyl, branched C_3-C_{20} cycloalkyl, linear C_6-C_{20} aryl, branched C_6-C_{20} aryl, linear C_7-C_{20} alkenyl, branched C_7-C_{20} alkenyl, linear C_7-C_{20} arylalkyl, branched C_7-C_{20} arylalkyl, linear C_7-C_{20} arylalkenyl, branched C_7-C_{20} arylalkenyl, linear C_7-C_{20} alkylaryl, and branched C_7-C_{20} alkylaryl; and optionally each R group contains a heteroatom selected from the group consisting of: elements of groups 14 through 16 of the periodic table of the elements and boron.

85. A process according to Claim 66 wherein in formula I or II M is selected from the group consisting of: Ti, Zr, and Hf.

86. A process according to Claim 66 wherein in formula I or II the R group containing the group OSiR″ is selected from the group consisting of: $-CH_2-CH_2-OSiMe_3$, $-CH_2-CH_2-CH_2-OSiMe_3$, $-CH_2-O-CH_2-OSiMe_3$, $-O-CH_2-CH_2-OSiMe_3$, and $-SiMe_2-CH_2-CH_2-OSiMe_3$.

87. A process according to Claim 66 wherein in formula I G is cyclopentadienyl or indenyl; M is zirconium; **x** is 2; **y** is 2; R is C_1-C_4 alkyl, wherein at least one hydrogen of one R is substituted with $OSiR''_3$ wherein R″ is selected from the group consisting of:

Me, Et, and Pr.

88. A process according to Claim 84 wherein in formula II M is zirconium; G_1 and G_2 are cyclopentadienyl or indenyl; R is hydrogen, a C_1-C_4 alkyl wherein at least one hydrogen of one R is substituted with $OSiR''_3$ or a SiR'_2-$OSiR''_3$ group, wherein R" is selected from the group consisting of: methyl, ethyl, propyl; $[(R)_cQ]_m$ is H_2C-CH_2, CRH-CH_2, RHC-SiR'_2, R_2C-SiR'_2, and SiRR'.

89. A process according to Claim 66 wherein in formula II M is titanium; G_2 is an oxygen or a nitrogen atom; G_1 is a cyclopentadienyl, indenyl or fluorenyl ring; $[(R)_cQ]_m$ is H_2C-CH_2, CRH-CH_2, RHC-SiR'_2, R_2C-SiR'_2, or SiRR'.

90. A process according to Claim 68 wherein the cocatalyst is selected from the group consisting of: an alkylaluminoxane, boron compounds, and mixtures thereof.

91. A process according to Claim 66, wherein the support comprises an inorganic solid selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

92. A process according to Claim 84, wherein the support comprises a porous inorganic solid, and wherein the porous inorganic solid is an inorganic oxide selected from the group consisting of: silica, alumina, silica-alumina, aluminum phosphates, and mixtures thereof.

93. A process as claimed in Claim 66, wherein in step (b) the solvent is eliminated through evaporation.

94. A process for preparing a copolymer, the process comprising

contacting the catalyst claimed in Claim 56 with a monomer and a copolymer to copolymerize the monomer and the comonomer and to produce the copolymer.

95. A process as claimed in Claim 94, wherein the comonomer is an alpha-olefin selected from the group consisting of propylene, butene, hexene, octene, and 4-methyl-1-pentene.

96. A process as claimed in Claim 94, wherein the monomer comprises ethylene.

97. A process as claimed in Claim 95, wherein the monomer comprises ethylene.

98. A process as claimed in Claim 94, wherein the copolymerization occurs at a temperature between 30°C and 100°C.

99. A process as claimed in Claim 94, wherein the copolymerization occurs at a temperature between 120°C and 250°C.

100. A process as claimed in Claim 94, wherein the copolymerization occurs at a pressure in a range from atmospheric pressure to 350 MPa.

101. A process as claimed in Claim 94, wherein the copolymerization occurs in a solution, in a suspension, in a gas phase, or in a mass.

102. A process for preparing a polymer, the process comprising contacting the catalyst claimed in Claim 56 with a monomer to polymerize the monomer and to produce the polymer.

103. A process as claimed in Claim 102, wherein the monomer comprises ethylene.

104. A process as claimed in Claim 102, wherein the polymerization occurs at a temperature between 30°C and 100°C.

105. A process as claimed in Claim 102, wherein the polymerization occurs at a temperature between 120°C and 250°C.

106. A process as claimed in Claim 102, wherein the polymerization occurs at a pressure in a range from atmospheric pressure to 350 MPa.

107. A process as claimed in Claim 102, wherein the polymerization occurs in a solution, in a suspension, in a gas phase, or in a mass.

108. A process as claimed in Claim 66, wherein in the metallocene complex the $OSiR"_3$ group is not directly bonded to Q when Q is Si.

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REMARKS

This response is being submitted within three months after the shortened one-month statutory period set for responding to the Office Action mailed on April 10, 2000. Therefore, a petition and fee for a three-month extension are enclosed herewith.

This response cancels previously pending Claims 1-12, 14, and 19-